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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,133	07/30/2003	Jeremy John Carroll	B-5177 621118-8	1835

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER
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NGUYEN, ALLEN H

ART UNIT	PAPER NUMBER
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2625

MAIL DATE	DELIVERY MODE
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06/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/632,133	CARROLL, JEREMY JOHN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Allen H. Nguyen	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 July 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date see attached.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. The information disclosure statements (IDS) submitted on 07/30/03 and 11/24/03 have been considered by the examiner.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeHority (US 5,267,727) in view of Freedman (US 4,839,829).

Regarding claim 1, DeHority '727 discloses a method of assigning a print job in a printing system, the printing system comprising at least one printer and at least one computer connected to said printer(s) (i.e., multiple users at various computers 10 and 12 send print jobs over a conventional local area network 14, such as an Ethernet, to a conventional printer 16; see col. 2, lines 51-53, and fig.

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1), wherein the or each printer has a plurality of different printing configurations and the computer is capable of generating at least one print job (i.e., the user would be able to complete a specification by using a print job specification menu on the users computer which allows selection from all the possible printer configurations; see col. 3, lines 52-55), said print job(s) having corresponding printing requirements (i.e., it is possible for all the possible job requirements and all the possible combinations of printer configurations to be used to create a table addressable by the current printer configuration and the print job requirements; see col. 12, lines 65-68), each printing configuration being capable of satisfying one or more printing requirements (i.e., printer capability matching procedure which will match jobs with printer capability; see col. 2, lines 16-17), the method comprising the steps of:

- i) creating one or more print jobs (i.e., computers 10 and 12 send print jobs over a conventional local area network 14, such as an Ethernet, to a conventional printer 16; see col. 2, lines 51-53, and fig. 1, printer 16);
- ii) notionally assigning the or each print job across one or more of the printers in such a way that the one or more of the printers have printing configurations that are capable of satisfying the printing requirements (i.e., the user would be able to complete such a specification by using a print job specification menu on the users computer which allows selection from all the possible printer configurations; see col. 3, lines 52-55, and fig. 2A, Stapling Mismatch 42);

It is noted that DeHority '727 does not explicitly show

iii) calculating a cost for printing the or each print job according to said notional assignment;

iv) at least once for a different notional assignment;

v) selecting according to the calculated costs a preferred assignment of the or each print job.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Freedman '829. In particular, Freedman '829 teaches

iii) calculating a cost for printing the or each print job according to said notional assignment (i.e., this information is then forwarded to an in-house printing estimator for cost analysis regarding the number and types of supplies to be used in the printing job; see col. 12, lines 42-45);

iv) at least once for a different notional assignment (i.e., the computer calculates cost information utilizing alternate pricing strategies based upon usage of different printing or publishing equipment and based upon the parameters of differing printing facilities; see col. 10, lines 16-19);

v) selecting according to the calculated costs a preferred assignment of the or each print job (i.e., the requester is then provided with information regarding the various job costs, timing, etc. and is given the opportunity to select

a particular printing facility or a particular machine or mix of machines for production of the job; see col. 10, lines 20-25).

In view of the above, having the system of DeHority '727 and then given the well-established teaching of Freedman '829, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of DeHority '727 as taught by Freedman '829, since Freedman '829 stated in col. 1, line 42+ that such a modification would efficiently and cost effectively eliminate many of the intrinsic impediments incurred in the routine business practices of the printing industry.

Regarding claim 2, DeHority '727 does not disclose in which the printer has a pre-existing printing configuration, and said calculation of the cost includes an assessment of the cost of any needed changes from the pre-existing configuration(s) to changed configuration(s) so that the printer(s) can satisfy the printing requirements.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Freedman '829. In particular, Freedman '829 teaches the printer has a pre-existing printing configuration (i.e., the computer 20 then asks the requester to select a printing parameter design template which may have been previously established for a particular type of printing job and the customer may elect to enter printing parameters to establish a new custom design template; see col. 8, lines 21-26), and said calculation of the cost includes an assessment of the cost of any needed changes from the pre-existing

configuration(s) to changed configuration(s) so that the printer(s) can satisfy the printing requirements (i.e., the computer then calculates cost information utilizing alternate pricing strategies based upon usage of different printing or publishing equipment and based upon the parameters of differing printing facilities; see col. 10, lines 16-19).

In view of the above, having the system of DeHority '727 and then given the well-established teaching of Freedman '829, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of DeHority '727 as taught by Freedman '829, since Freedman '829 stated in col. 1, line 42+ that such a modification would efficiently and cost effectively eliminate many of the intrinsic impediments incurred in the routine business practices of the printing industry.

Regarding claim 3, DeHority '727 does not disclose in which said needed changes include manual reconfiguration of at least one printer, said calculated cost then including an assessment of the cost of such a manual reconfiguration.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Freedman '829. In particular, Freedman '829 teaches in which said needed changes include manual reconfiguration of at least one printer (i.e., the network also generates machine settings which may be directly or manually applied to graphic machines, for example, numerical control settings; see col. 13, lines 13-16), said calculated cost then including an assessment of

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the cost of such a manual reconfiguration (i.e., based upon time, cost and the quality needs for the job; see col. 12, lines 37-38).

In view of the above, having the system of DeHority '727 and then given the well-established teaching of Freedman '829, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of DeHority '727 as taught by Freedman '829, since Freedman '829 stated in col. 1, line 42+ that such a modification would efficiently and cost effectively eliminate many of the intrinsic impediments incurred in the routine business practices of the printing industry.

Regarding claim 4, DeHority '727 does not disclose in which the preferred assignment of the printing job requires a manual reconfiguration of at least one printer, in which the printing system after selection of said preferred assignment then presents to a user of the printing system instructions for manually reconfiguring said printer(s).

However, the above-mentioned claimed limitations are well known in the art as evidenced by Freedman '829. In particular, Freedman '829 teaches in which the preferred assignment of the printing job requires a manual reconfiguration of at least one printer (i.e., the network also generates machine settings which may be directly or manually applied to graphic machines, for example, numerical control settings; see col. 13, lines 13-16), in which the printing system after selection of said preferred assignment then presents to a user of the printing system instructions for manually reconfiguring said printer(s)

(i.e. , custom design format selected by user; see fig. 2A, Enter Typeface

Selected for Mainbody of Text).

In view of the above, having the system of DeHority '727 and then given the well-established teaching of Freedman '829, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of DeHority '727 as taught by Freedman '829, since Freedman '829 stated in col. 1, line 42+ that such a modification would efficiently and cost effectively eliminate many of the intrinsic impediments incurred in the routine business practices of the printing industry.

Regarding claim 7, DeHority '727 does not disclose the calculated cost is an economic cost.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Freedman '829. In particular, Freedman '829 teaches in which the calculated cost is an economic cost (i.e., advanced capabilities to define the waste per process and on a per machine basis so as to accurately arrive at the optimum economic selection for manufacturing the printed job).

In view of the above, having the system of DeHority '727 and then given the well-established teaching of Freedman '829, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of DeHority '727 as taught by Freedman '829, since Freedman '829 stated in col. 1, line 42+ that such a modification would efficiently and cost

effectively eliminate many of the intrinsic impediments incurred in the routine business practices of the printing industry.

Regarding claim 8, DeHority '727 discloses a printing system, the printing system comprising at least one printer and at least one computer connected to said printer (fig. 1), the printer having a plurality of different printing configurations (i.e., a print job specification menu on the users computer which allows selection from all the possible printer configurations; see col. 3, lines 52-55) and the computer being capable of generating at least one print job (i.e., multiple users at various computers 10 and 12 send print jobs over a conventional local area network 14, such as an Ethernet, to a conventional printer 16; see col. 2, lines 51-53, and fig. 1), said print job(s) having corresponding printing requirements (i.e., a printed document best matching the job requirements; see col. 4, line 37 ), each printing configuration being capable of satisfying one or more printing requirements,

It is noted that DeHority '727 does not explicitly show wherein the printing system is arranged to calculate a cost for printing the or each print job according to different notional assignments of the or each print job across one or more of the printers in such a way that said printers have printing configurations that are capable of satisfying the printing requirements, and to select according to the calculated costs a preferred assignment of the or each print job.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Freedman '829. In particular, Freedman '829 teaches wherein the printing system is arranged to calculate a cost for printing the or each print job according to different notional assignments of the or each print job across one or more of the printers in such a way that said printers have printing configurations that are capable of satisfying the printing requirements (i.e., the requester is provided with information regarding the various job costs, timing, etc. and is given the opportunity to select a particular printing facility or a particular machine or mix of machines for production of the job; see col. 10, lines 20-24), and to select according to the calculated costs a preferred assignment of the print job (i.e., a printing facility can quickly and accurately provide a cost estimate for a particular job; see col. 10, lines 58-59).

In view of the above, having the system of DeHority '727 and then given the well-established teaching of Freedman '829, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of DeHority '727 as taught by Freedman '829, since Freedman '829 stated in col. 1, line 42+ that such a modification would efficiently and cost effectively eliminate many of the intrinsic impediments incurred in the routine business practices of the printing industry.

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5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeHority (US 5,267,727) in view of Freedman (US 4,839,829), and further in view of Utsunomiya (US 2004/0042042).

Regarding claim 5, the combination of DeHority '727 and Freedman '829 does not disclose in which the print job is assigned to more than one printer, and the printing system presents to a user of the printing system instructions for any or all of locating, assembling, collating, binding, or otherwise combining material printed from the printers.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Utsunomiya '042. In particular, Utsunomiya '042 teaches the print job is assigned to more than one printer (i.e., one personal computer can also divide a set of printing data (one print job) into plural parts, and send the parts to a plurality of printers, with each part being sent to a different printer; see page 1, paragraph [0015]), and the printing system presents to a user of the printing system instructions for any or all of locating, assembling, collating, binding (i.e., the guidance information or banner data provides directions for assembling and arranging the data sheets printed by printers 105 through 108 in order to guide the assembly of the divided print data; see page 3, paragraph [0034]).

In view of the above, having the combination system of DeHority '727 and Freedman '829, and then given the well-established teaching of Utsunomiya '042, it would have been obvious to one having ordinary skill in the art at the time

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of the invention was made to modify the combination system of DeHority '727 and Freedman '829 as taught by Utsunomiya '042, since Utsunomiya '042 stated on page 1, paragraph [0002] that such a modification would relate to printing one print job by dividing it among the plurality of image printing apparatuses.

Regarding claim 6, the combination of DeHority '727 and Freedman '829 does not disclose in which the print job has a plurality of different parts, each part having different printing requirements, and the print job is split according to those different requirements.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Utsunomiya '042. In particular, Utsunomiya '042 teaches the print job has a plurality of different parts (i.e., one print job into plural parts, and send the parts to a plurality of printers; see page 1, paragraph [0015]), each part having different printing requirements (i.e., the printing data are converted to image data which can be printed out at the printer requirements; see page 1, paragraph [0015]), and the print job is split according to those different requirements (i.e., the printer forms an image on a sheet in accordance with the image data; see page 1, paragraph [0015]).

In view of the above, having the combination system of DeHority '727 and Freedman '829, and then given the well-established teaching of Utsunomiya '042, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the combination system of DeHority '727

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and Freedman '829 as taught by Utsunomiya '042, since Utsunomiya '042 stated on page 1, paragraph [0002] that such a modification would relate to printing one print job by dividing it among the plurality of image printing apparatuses.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Konishi (US 2004/0012807) discloses print system and printer.

Christodoulou et al. (US 7,148,985) discloses management of print services.

Rai et al. (US 7,079,266) disclose printshop resource optimization via the use of autonomous cells.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen H. Nguyen whose telephone number is 571-270-1229. The examiner can normally be reached on M-F from 9:00 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571)-272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
AUNG S. MOE  
SUPERVISORY PATENT EXAMINER

  
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